

What is Claimed is:

1. An adhesive article comprising:
 - (a) a first substrate comprising a first major surface;
 - (b) a first adhesive, wherein the first adhesive comprises no more than
5 5% by weight acrylic acid repeat units; and
 - (c) a first primer interposed between at least a portion of the first major surface of the substrate and at least a portion of the adhesive, wherein the first primer consists essentially of nanoparticles.
2. The adhesive article of claim 1, wherein the first substrate is untreated.
- 10 3. The adhesive article of claim 1, wherein the first substrate comprises a polymeric film.
4. The adhesive article of claim 1, wherein the first substrate comprises a foam.
5. The adhesive article of claim 4, wherein the foam comprises a polymer
15 selected from the group consisting of: acrylic, polyethylene, ethylene vinyl acetate, and combinations thereof.
6. The adhesive article of claim 1, wherein the first adhesive comprises at least one of: silicone polyurea and acrylate.
7. The adhesive article of claim 1, wherein the nanoparticles have a maximum
20 cross sectional dimension of no more than 20 nanometers.
8. The adhesive article of claim 1, wherein the nanoparticles are selected from the group consisting of: silica, ceria, iron oxide, and combinations thereof.
9. The adhesive article of claim 1, wherein the nanoparticles are surface modified.

10. The adhesive article of claim 1, further comprising a second primer interposed between at least a portion of the second major surface of the first substrate and at least a portion of a second adhesive.

5 11. The adhesive article of claim 1, further comprising a second primer interposed between at least a portion of a first major surface of a second substrate and at least a portion of the first adhesive.

12. An adhesive article comprising:
(a) a foam substrate;
(b) a first adhesive; and
10 (c) a first primer interposed between the foam substrate and the first adhesive, wherein the primer consists essentially of nanoparticles

13. The adhesive article of claim 12, wherein the foam substrate comprises a polymer selected from the group consisting of: acrylic, polyethylene, ethylene vinyl acetate, and combinations thereof.

15 14. The adhesive article of claim 12, wherein the first adhesive comprises at least one of: silicone polyurea and acrylate.

15. The adhesive article of claim 12, wherein the nanoparticles have a maximum cross sectional dimension of no more than 20 nanometers.

20 16. The adhesive article of claim 12, wherein the nanoparticles are selected from the group consisting of: silica, ceria, iron oxide, and combinations thereof.

17. The adhesive article of claim 12, wherein the nanoparticles are surface modified.

25 18. The adhesive article of claim 12, further comprising a second primer interposed between at least a portion of the second major surface of the foam substrate and at least a portion of a second adhesive.

19. The adhesive article of claim 12, further comprising a second primer interposed between at least a portion of a first major surface of a substrate and at least a portion of the first adhesive.

20. A method of bonding an adhesive layer to a foam substrate comprising:

5 (a) interposing a primer consisting essentially of nanoparticles between a first major surface of the foam substrate and a first major surface of the adhesive layer;

(b) adhering at least a portion of the first major surface of the foam substrate to the primer; and

10 (c) adhering at least a portion of the first major surface of the adhesive layer to the primer.

21. The method of claim 20, wherein the foam substrate comprises a polymer selected from the group consisting of: acrylic, polyethylene, ethylene vinyl acetate, and combinations thereof.

15 22. The method of claim 20, wherein the adhesive comprises no more than 5% by weight acrylic acid repeat units.

23. The method of claim 20, wherein the adhesive comprises at least one of: silicone polyurea and acrylate.

20 24. The method of claim 20, wherein the nanoparticles have a maximum cross sectional dimension of no more than 20 nanometers.

25. The method of claim 20, wherein the nanoparticles are selected from the group consisting of: silica, ceria, iron oxide, and combinations thereof.

26. The method of claim 20, wherein the nanoparticles are surface modified.

25 27. The method of claim 20, wherein (b) comprises providing a primer solution comprising the nanoparticles and applying the primer solution to at least a portion of the first major surface of the foam substrate; and (c) comprises contacting at least a portion of the primed portion of the first major surface of the foam substrate with at least a portion of the first major surface of the adhesive layer.

28. The method of claim 20, wherein (c) comprises providing a primer solution comprising the nanoparticles and applying the primer solution to at least a portion of the first major surface of the adhesive layer; and (b) comprises contacting at least a portion of the primed portion of the first major surface of the adhesive layer with at least a portion of the first major surface of the foam substrate.

29. A method of bonding an adhesive layer to a substrate comprising:

(a) interposing a primer consisting essentially of nanoparticles between a first major surface of the substrate and a first major surface of the adhesive layer, wherein the adhesive layer comprises no more than 5% by weight acrylic acid repeat units;

(b) adhering at least a portion of the first major surface of the substrate to the primer; and

(c) adhering at least a portion of the first major surface of the adhesive layer to the primer.

30. The method of claim 29, wherein the substrate is a polymeric film.

31. The method of claim 31, wherein the substrate comprises a polymer selected from the group consisting of: polyolefins, polyesters, polyimides, polystyrenes, acrylics, polyacrylates, polymethacrylates, polymethylmethacrylates, polyurethanes, urethane acrylate polymers, epoxy acrylate polymers, polyacetals, polycarbonate, polysulfone, cellulose acetate butyrate, polyvinyl chloride, and combinations thereof.

32. The method of claim 29, wherein the adhesive comprises at least one of: silicone polyurea and acrylate.

33. The method of claim 29, wherein the nanoparticles have a maximum cross sectional dimension of no more than 20 nanometers.

34. The method of claim 29, wherein the nanoparticles are selected from the group consisting of: silica, ceria, iron oxide and combinations thereof.

35. The method of claim 29, wherein the nanoparticles are surface modified.

36. The method of claim 29, wherein (b) comprises providing a primer solution comprising the nanoparticles and applying the primer solution to at least a portion of the first major surface of the substrate; and (c) comprises contacting at least a portion of the primed portion of the first major surface of the substrate with at least a portion of the first major surface of the adhesive layer.

37. The method of claim 29, wherein (d) comprises providing a primer solution comprising the nanoparticles and applying the primer solution to at least a portion of the first major surface of the adhesive layer; and (c) comprises contacting at least a portion of the primed portion of the first major surface of the adhesive layer with at least a portion of the first major surface of the substrate.